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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/662,209	09/14/2000	Bruno Acklin	P00,1314	5877

7590

09/11/2002

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EXAMINER

RODRIGUEZ, ARMANDO

ART UNIT

PAPER NUMBER

2828

DATE MAILED: 09/11/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

09/662,209

Applicant(s)

ACKLIN ET AL.

Examiner

Armando Rodriguez

Art Unit

2828

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 05 June 2002.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-22 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-22 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers


- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 14 September 2000 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

## Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

## Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_

  
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TECHNOLOGY CENTER 2800

## **DETAILED ACTION**

### ***Response to Arguments***

Applicant's arguments with respect to claims 1-22 have been considered but are moot in view of the new ground(s) of rejection.

### ***Drawings***

The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the plurality of lasers must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.

A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

### ***Claim Objections***

~~Claim 4 is objected to because of the following informalities: no patentable weight has been given to the process used to form the mirrored surface, since it implies a product-by-process claim. Appropriate correction is required.~~

Claim 6 is objected to because of the following informalities: spelling of has. Appropriate correction is required.

~~Claim 10 is objected to because of the following informalities: no patentable weight has been given to the technology used to form the ceramic carrier, since it implies a product-by-process claim. Appropriate correction is required.~~

Claim 16 is objected to because of the following informalities: spelling of anti-reflection. Appropriate correction is required.

~~Claim 21 is objected to because of the following informalities: no patentable weight has been given to the process used to secure the carrier plate, since it implies a product-by-process claim. Appropriate correction is required.~~

### ***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1,2,3,5,6,8,9,15,16 and 20-22 are rejected under 35 U.S.C. 102(b) as being anticipated by Jewell et al (PN 5,500,540).

Figure 1 illustrates an array of lasers having an optoelectronic chip (12) where the array of lasers are carried, an optical chip (28), which covers the array of lasers with an optical element (30) where the laser beam emits. A wire bond (20) electrically connects the laser to a terminal pin (26). Pins (26) are connected through macroscopic package (24) where optical chip is mounted.

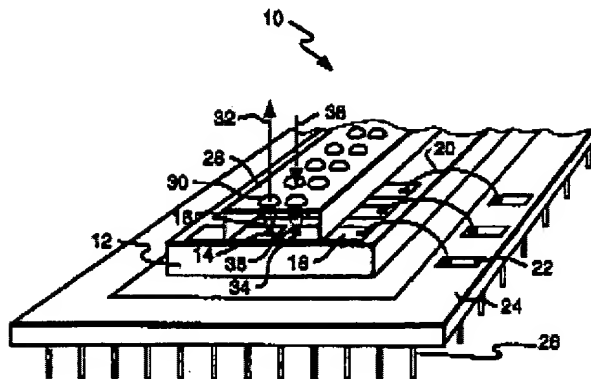
Figure 5 illustrates an optical chip (80) having optical elements, which may be used in place of optical chip (28), as disclosed in column 8 lines 23-49.

U.S. Patent

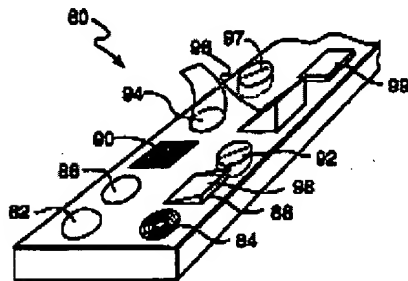
Mar. 19, 1996

Sheet 1 of 10

5,500,540



**FIG. 1**



**FIG. 5**

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 4, 7 and 10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Jewell et al (PN 5,500,540) in view of Hwu et al (6,259,713).

Figure 1 illustrates an array of lasers having an optoelectronic chip (12) where the array of lasers are carried, an optical chip (28), which covers the array of lasers with an optical element (30) where the laser beam emits. A wire bond (20) electrically connects the laser to a terminal pin (26). Pins (26) are connected through macroscopic package (24) where optical chip is mounted.

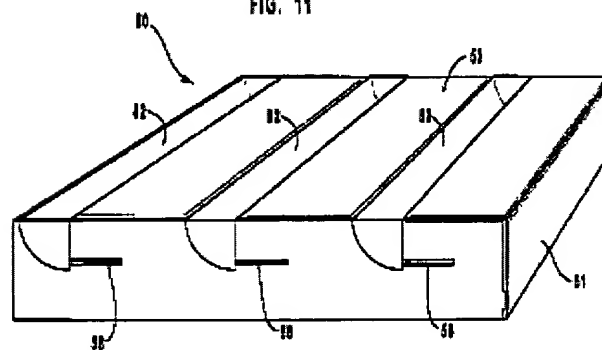
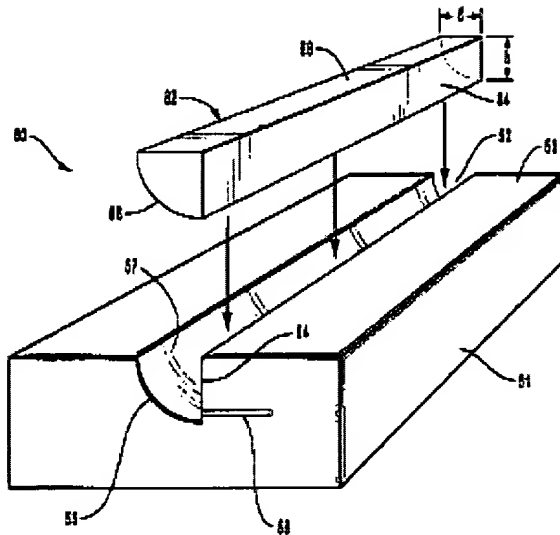
Figure 5 illustrates an optical chip (80) having optical elements, which may be used in place of optical chip (28), as disclosed in column 8 lines 23-49.

Jewell et al does not disclose a ceramic carrier having a mirrored surface or a recess within the carrier.

Hwu et al illustrates in figures 11 and 12 a ceramic substrates having a recess within the substrate and having a mirrored surface on the ceramic substrate where a transparent optical element is placed within the recess which includes the mirrored surface to reflect the laser beams of the diode laser array towards a transparent flat surface which covers the entire recess. In column 11 lines 18-25 discloses using ceramic substrates are highly thermally conductive.

Therefore, it would have been obvious to a person having ordinary skill in the art to use a ceramic substrate as taught by Hwu et al because it would improve heat dissipation of the laser beams.

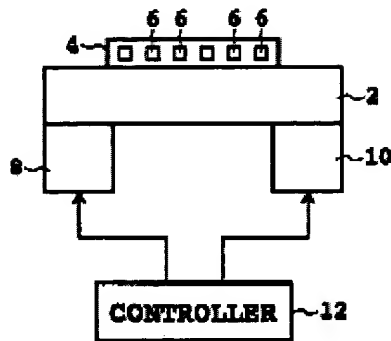
U.S. Patent Jul. 10, 2001 Sheet 9 of 14 US 6,259,713 B1



Claims 17-19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Yamamoto et al (PN 6,038,242).

The use of Peltier elements to provide cooling or temperature control to the substrates of laser system is well known in the laser art as shown in figure 1.

**F I G. 1**



Claims 11-14 are rejected under 35 U.S.C. 103(a) as being unpatentable.

The use of adhesives or solder to bond structural elements in the laser art is notoriously well known in the art.

### **Conclusion**

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Armando Rodriguez whose telephone number is (703) 308-6218. The examiner can normally be reached on 10-hour day / M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Paul Ip can be reached on (703) 308-3098. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 308-7722 for regular communications and (703) 308-7721 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-4881.

Armando Rodriguez  
Examiner  
Art Unit 2828

*Paul Ip*  
Paul Ip  
Supervisor  
Art Unit 2828

AR/PI  
September 3, 2002